

**UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XC110NM

Site Name: Sandy

Precipitation or Climate Zone: 12 to 16 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site usually occurs on level to gently sloping or undulating piedmont slopes or plains. Slopes may range to 15 percent but will average less than 10 percent. Elevation range from about 5,000 to 6,500 feet above sea level.

Land Form:

1. Fan piedmont
2. Plain
- 3.

Aspect:

1. N/A
- 2.
- 3.

	Minimum	Maximum
Elevation (feet)	5,000	6,500
Slope (percent)	0	15
Water Table Depth (inches)	N/A	N/A
Flooding:	Minimum	Maximum
Frequency	N/A	N/A
Duration	N/A	N/A
Ponding:	Minimum	Maximum
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Average annual precipitation varies from about 12 inches to just over 16 inches. Substantial fluctuations from year to year are common, ranging from a low of about 6 inches to a high of over 30 inches. Approximately one-half of the annual precipitation comes in the form of rainfall during the months of July, August, and September, although wintertime precipitation in the form of snow, sleet, or rain is sometimes significant. Spring and late fall months are normally dry.

The average frost-free period ranges from about 165 to 190 days and extends from approximately the third or fourth week in April to mid October. Average annual air temperatures are about 56 degrees F. Summer maximums can exceed 100 degrees F and winter minimums on occasion go below zero. Monthly mean temperatures generally exceed 70 degrees F for the period of June through August.

Growing conditions favor warm-season perennial vegetation, although late winter and late summer precipitation is adequate to foster a significant cool-season component in the potential plant community. Occasional wet springs also create good conditions for annual forb production, but frequent winds from the west and southwest are common during this time of year and tend to deplete soil moisture at a critical time for the growth of these plants.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	125	187
Freeze-free period (days):	146	211
Mean annual precipitation (inches):	12	16

Monthly moisture (inches) and temperature (°F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.37	1.22	16.2	55.6
February	.35	.94	18.6	60.1
March	.26	.95	22.1	66.1
April	.26	.42	27.0	74.2
May	.12	.58	34.0	82.6
June	.53	.98	42.8	92.0
July	2.29	3.32	52.5	92.6
August	2.50	3.22	51.4	89.9
September	1.62	2.85	43.5	85.7
October	1.17	1.81	32.0	76.2
November	.41	1.58	22.0	64.4
December	.61	1.85	15.9	55.9

Climate Stations:

Station ID	Location	Period	
		From:	To:
299806	Chloride Ranger Stn., NM	05/14/49	12/31/00
291910	Cliff 11SE, NM	01/01/37	12/31/00
294009	Hillsboro, NM	10/01/24	12/31/00
297386	Hood Ranger Stn., NM	04/01/54	12/31/00
298324	Silver City, NM	01/01/61	12/31/00

INFLUENCING WATER FEATURES**Narrative:**

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils are moderately deep to deep and well drained. Typically, the surface layer is a fine sandy loam to loamy fine sand more than 5 inches thick over sandy clay loam, clay loam, fine sandy loam, or very fine sandy loam. The soils have moderately slow to moderately rapid permeability with moderate to high water-holding capacity.

Due to their sandy surface textures, these soils are subject to soil blowing when the surface is not adequately protected by plant cover and may become duned or hummocky where natural vegetation has declined.

Parent Material Kind: Alluvium

Parent Material Origin: Mixed

Surface Texture:

1. Sandy loam
2. Loamy sand
3. Loamy fine sand
4. Fine sand

Surface Texture Modifier:

1. N/A
- 2.
- 3.

Subsurface Texture Group: Loamy

Surface Fragments ≤3" (% Cover): N/A

Surface Fragments >3" (% Cover): N/A

Subsurface Fragments ≤3" (%Volume): N/A

Subsurface Fragments ≥3" (%Volume): N/A

	Minimum Well	Maximum Well
Drainage Class:		
Permeability Class:	Moderately slow	Moderately rapid
Depth (inches):	60	<72
Electrical Conductivity (mmhos/cm):	Unknown	Unknown
Sodium Absorption Ratio:	Unknown	Unknown
Soil Reaction (1:1 Water):	Unknown	Unknown
Soil Reaction (0.1M CaCl₂):	Unknown	Unknown
Available Water Capacity (inches):	6	12
Calcium Carbonate Equivalent (percent):	Unknown	Unknown

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label:** HCPC

Plant Community Narrative: Historic Climax Plant Community

This site has a grassland aspect characterized by short and mid-grasses. Black grama and blue grama co-dominate, with lesser amounts of sand dropseed, threeawns, sideoats grama, tobosa, and spike dropseed typically present. Soaptree yucca, Mormon-tea, and occasionally sacahuista are the principal woody or shrub-like species. Annual buckwheats, filaree, globemallow, and desert bailey are common in minor amounts. Broom snakeweed is most common in certain wet years and as the plant community deteriorates from its potential.

Canopy Cover:

Trees	0
Shrubs and half shrubs	7 %
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	18
Bare ground	71
Surface gravel	1
Surface cobble and stone	0
Litter (percent)	10
Litter (average depth in cm.)	1

Plant Community Annual Production (by plant type): _____

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	260	470	680
Forb	26	47	68
Tree/Shrub/Vine	42	76	111
Lichen			
Moss			
Microbiotic Crusts			
Total	325	588	850

Plant Community Composition and Group Annual Production:**Plant Type - Grass/Grasslike**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	BOER4	Black Grama	176 – 206	176 – 206
2	BOGR2	Blue Grama	88 – 118	88 – 118
3	BOCU	Sideoats Grama	6 – 29	6 – 29
4	BOHI2	Hairy Grama	6 – 18	6 – 18
5	SPCR SPCO4	Sand Dropseed Spike Dropseed	29 – 59	29 – 59
6	ARIST MUTO2	Threeawn spp. Ring Muhly	18 – 47	18 – 47
7	PLMU3	Tobosa	6 – 29	6 – 29
8	MUPO2	Bush Muhly	6 – 29	6 – 29
9	LYPH	Wolftail	6 – 18	6 – 18
10	DICA8 SEVU2 BOBA3	Arizona Cottontop Plains Bristlegrass Cane Bluestem	6 – 29	6 – 29
11	DAPU7 2GA	Fluffgrass Annual Grasses	6 – 18	6 - 18

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
12	ERIOG SPHAE BAMU ERCI6 CROTO	Wild Buckwheat Globemallow spp. Desert Bailey Filaree Croton	6 – 29	6 – 29
13	OXYTR SAKA DESO2 SEFLF	Locoweed spp. Russian Thistle Tansy Mustard Threadleaf Groundsel	6 – 18	6 – 18
14	2FORBS	Other Forbs	6 – 29	6 – 29

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
15	YUEL	Soaptree Yucca	6 – 29	6 – 29
16	EPVI NOMI	Mormon-tea Sacahuista	6 – 18	6 – 18
17	GUSA2 ARFI2	Broom Snakeweed Sand Sagebrush	6 – 29	6 – 29
18	ATCA2 KRLA	Fourwing Saltbush Winterfat	6 – 29	6 – 29
19	OPSP2	Cholla Cactus	6 – 18	6 – 18

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Growth CurvesGrowth Curve ID 0610NMGrowth Curve Name: HCPCGrowth Curve Description: Mixed short/mid-grassland with scattered shrubs and a minor forb component.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	5	7	10	15	25	25	8	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This ecological site provides habitat which can support a resident animal community characterized by pronghorn antelope, black-tailed jackrabbit, Botta's pocket gopher, plains pocket mouse, white-footed mouse, cactus mouse, Northern grasshopper mouse, Ord's kangaroo rat, Southern plains woodrat, kit fox, badger, roadrunner, burrowing owl, loggerhead shrike, Scott's oriole, cactus wren, scaled quail, mourning dove, lesser earless lizard, leopard lizard, desert spiny lizard, round-tailed horned lizard, plains spadefoot toad, and black-headed snake.

Where large soaptree yucca, cholla cactus, and woody shrubs are present Scott's oriole, cactus wren, and mourning dove nest. Chestnut-collared longspur winters on this site.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations

Soil Series	Hydrologic Group
Ellicott	A
Clovis	?
Harvey	?
Palma	?
Penistaja	?

Recreational Uses:

This site offers limited recreation potential for hiking, horseback riding, picnicking, camping, nature observation, photography, and hunting for pronghorn antelope, scaled quail, and mourning dove. When favorable spring moisture conditions occur, a colorful display of wildflowers may be seen.

Wood Products:

This site has no significant value for wood products.

Other Products:**Grazing:**

This site, at its potential, is suitable for grazing in all seasons of the year. Although green forage is produced to some extent in the spring by annual forbs and a few early season grasses, the major production begins in early July and extends through September. The site is best adapted for cattle and possibly sheep and horses. It is less suitable for goats except in the lower condition classes where woody plants tend to take over. Site deterioration caused by inadequately managed livestock grazing is characterized by a decline in black grama and blue grama and an increase in threeawns, ring muhly, dropseeds, and tobosa. Moderate to heavy mesquite stands and hummocking may characterize serious retrogression. Brush control may be needed to affect a reasonable rate of recovery.

Other Information:**Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month**

Similarity Index	Ac/AUM
100 - 76	3.6 – 4.5
75 – 51	4.3 – 7.0
50 – 26	6.7 – 11.5
25 – 0	11.5+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Plant Preference by Animal Kind:

Animal Kind: Livestock

Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Black Grama	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	P	P
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Cane Bluestem	Bothriochloa barbinodis	EP	U	U	U	U	U	U	P	P	D	U	U	U
Arizona Cottontop	Digitaria californica	EP	U	U	U	U	U	U	P	P	D	U	U	U
Bush Muhly	Muhlenbergia porteri	EP	P	P	P	P	P	P	P	P	P	P	P	P
Winterfat	Krascheninnikovia lanata	EP	D	D	P	P	P	P	P	P	D	D	D	D

Animal Kind: Wildlife

Animal Type: Antelope

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Winterfat	Krascheninnikovia lanata	EP	D	D	D	D	D	D	D	D	D	D	D	D
Perennial Buckwheats	Eriogonum spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Filaree	Erodium cicutarium	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Globemallow	Sphaeralcea spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Wolftail	Lycurus phleoides	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: New Mexico

County: Grant, Hidalgo, Socorro

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? Yes ☐ No ☐

General Legal Description: _____

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico.

This site has been mapped and correlated with soils in the following soil surveys: Socorro, Sierra, Grant, Hidalgo, Catron.

Characteristic Soils Are:

Ellicott	
----------	--

Other Soils included are:

Clovis	Harvey
Palma	Penistaja

Site Description Approval:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester		Don Sylvester	

Site Description Revision:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	07/05/02	George Chavez	12/17/02